

Eucalyptus ordiana (Myrtaceae), a new species from the Kimberley, Western Australia

C.R. Dunlop¹ and C.C. Done²

¹ Conservation Commission of the Northern Territory, PO Box 496, Palmerston 0831

² Department of Conservation and Land Management, PO Box 242, Kununurra 6743

Abstract

Dunlop, C.R. and Done, C.C. *Eucalyptus ordiana* (Myrtaceae), a new species from the Kimberley, Western Australia. Nuytsia 8 (2): 195-199 (1992). A new species of *Eucalyptus* series *Subexsertae* is described and illustrated. The species is known only from populations just south of Kununurra, Western Australia.

Introduction

That the Kimberley region may still be regarded as a botanical frontier is evidenced by the many new records and new taxa reported from expeditions and surveys in the last two decades. A brief historical sketch provided by Kenneally (1989) documents recent publications along with a general history of botanical exploration in the region. Published works dealing specifically with Kimberley eucalypts are summarised by Brooker and Done (1986). More recently, "Eucalyptus II" (Carr & Carr 1988) and the "Flora of Australia" account (Chippendale 1988) have been published, the latter drawing together all species with the exception of those described in "Eucalyptus II". Twelve new species are described for north western Australia in "Eucalyptus II"; all are members of series *Terminaliptera* (Chippendale 1988).

The species described here, *E. ordiana*, a member of series *Subexsertae*, was first discovered in 1981 on the shores of Lake Kununurra on the Ord River.

E. ordiana possesses characters grouping it with species of Blakeley's series *Subexsertae* (Blakeley 1965, Chippendale 1988) and Pryor and Johnson's informal subgenus *Symphomyrtus*, section *Exsertaria*, series *Albae* (Pryor & Johnson 1971). Characters of series *Subexsertae* include smooth deciduous bark, hemispherical to conical (rostrate in *E. ordiana*) compound opercula, and shortly pedicelled or sessile, relatively small eupular fruit. Valves are exsert or nearly so and ovules are arranged in rows of 4-8 on the placenta. Broad, poplar-like juvenile leaves are a feature of most species of the series. The yellow-brown seed of *E. ordiana* matches well the seed of the subgroup of species which includes *E. brevifolia*, *E. confluens*, *E. umbrawarrensensis* and *E. leucophloia* as illustrated and described by Boland *et al.* (1980). The series is concentrated in the Kimberley and the northern part of the Northern Territory with the majority of species on sandstone or substrates derived from sandstone.

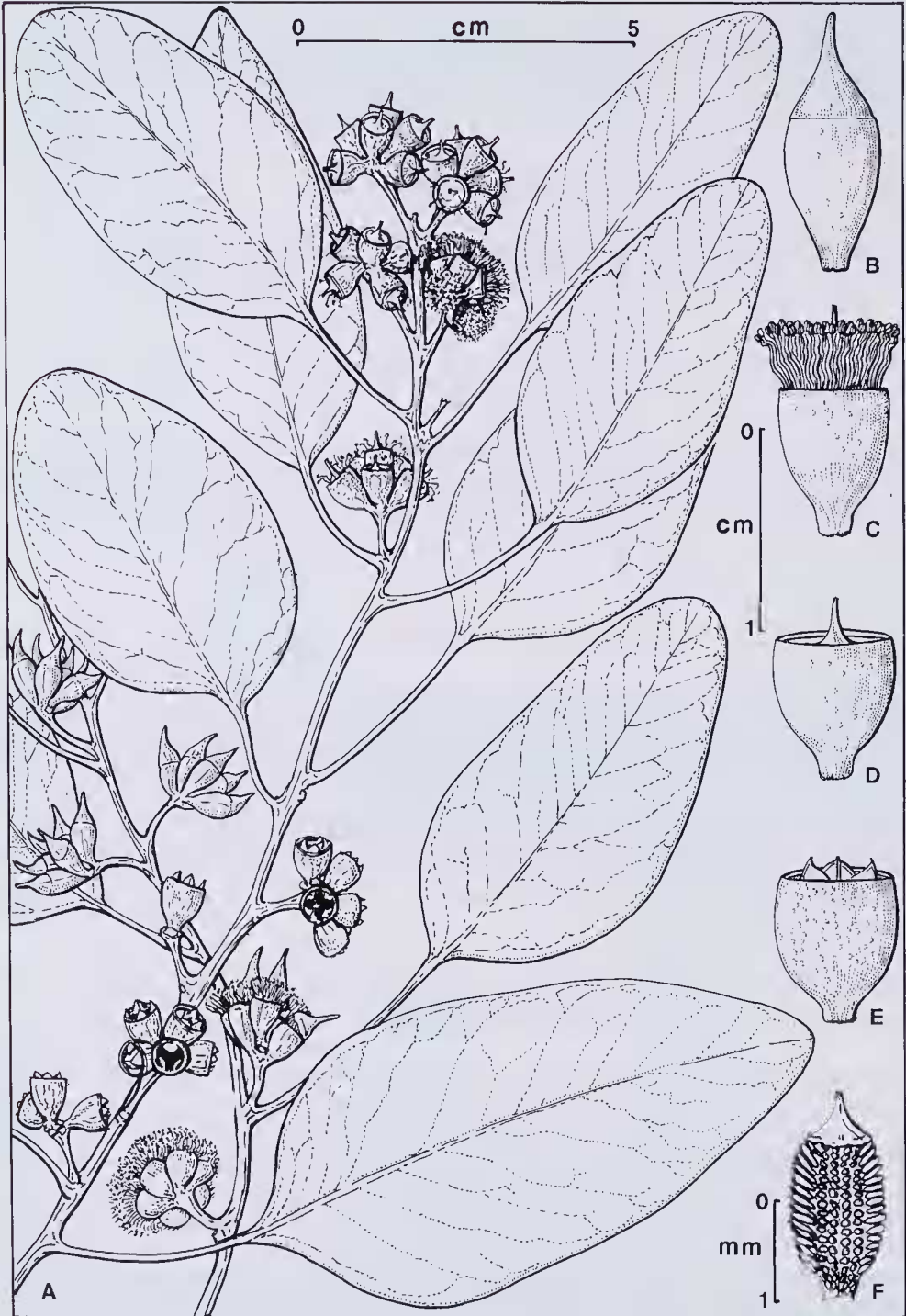


Figure 1. *Eucalyptus ordiana*. A - Flowering branch. B - Bud. C - Flower. D - Immature fruit. E - Fruit. F - Placenta section showing ovules and ovulodes. From Done 728.

Eucalyptus ordiana Dunlop & Done, sp. nov. (Figure 1)

Speciebus seriei *Subexsertae* affinis, praesertim *E. brevifolio*, a qua operculo longiore, constanter foliis latioribus et fructu minori differt.

Typus: Lake Kununurra, Ord River, 15° 54' S, 128° 45' E, C. Done 728, 9.i.1985 (holo: PERTH; iso: AD, BRI, CANB, CBG, DNA, K, MEL, NSW).

Seedlings lignotuberous; cotyledons reniform, 2-2.5 mm long, 4-5 mm wide; *seedling leaves* decussate for 3-7 or more pairs: first pair with petioles c. 2 mm long, blades narrowly lanceolate, 5-10 mm long, 1.5-3 mm wide, the subsequent pairs with progressively longer petioles and broader blades through to the adult form. Adult a single or multistemmed *tree* to c. 6 m high; stems to c. 20 cm diameter; bark smooth throughout, pruinose, weathering to a purplish colour. *Adult leaves* at first claret coloured, becoming glaucous; concolorous, the petiole and midrib pruinose; petioles 25-30 mm long; bases truncate, often slightly asymmetrical; blades ovate-lanceolate, ovate or rarely lanceolate; 55-130 mm long (including petioles), 18-55 mm wide; basal nerves at 50-60 degrees to midrib, lateral nerves at c. 40 degrees; intramarginal vein 1-5 mm from margin, higher orders of venation obscure; obtuse. *Umbels* solitary in the upper axils, 7-flowered; peduncles terete, 4-10 mm long, rarely longer. *Pedicels*, when present, 1-4 mm long. *Buds* pruinose or red or pink, the operculum paler than the hypanthium; sessile or shortly pedicellate, ellipsoid to fusiform, straight or slightly curved, c. 10 mm long. *Operculum* compound, rostrate, c. 5 mm long, \pm equal in length to the hypanthium. Outermost *stamens* erect in bud, median and inner inflexed. *Anthers* versatile, oblong; gland apical, globular, extending slightly beyond the thecae. *Ovary* 4 or 3 locular; vertical rows of ovules 6, in two sets of 3. *Fruits* usually pruinose, cupular, smooth, c. 6 mm long, c. 6 mm wide; staminophore c. 0.5 mm wide, rim and disc slightly narrower; valves exsert. *Seed* yellow—brown, discoid or angular, finely reticulate, the arcolac elongated; hilum ventral.

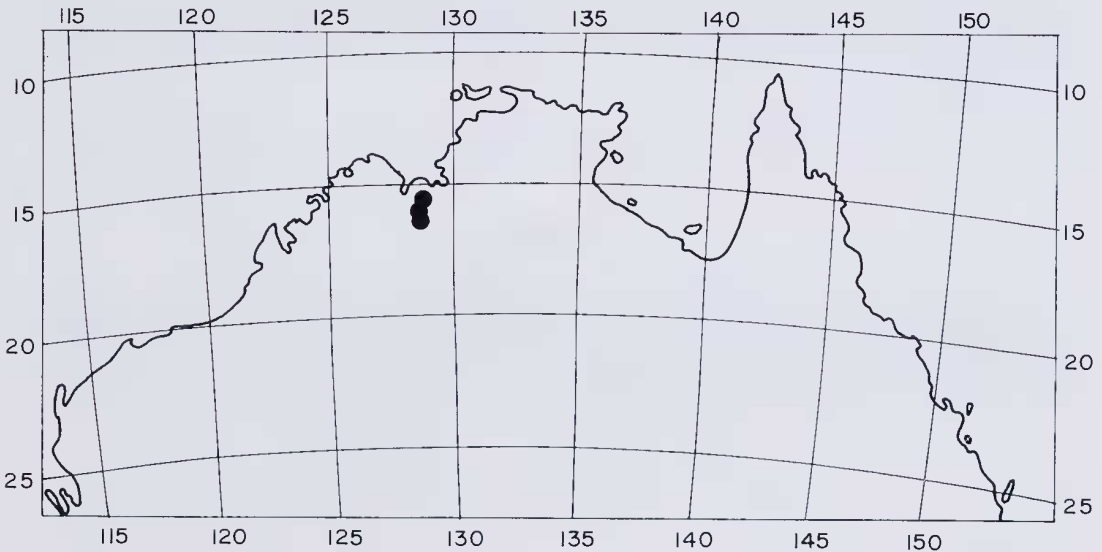


Figure 2. Distribution of *Eucalyptus ordiana*

Other specimens examined. (Note: the acronym CALM is an informal one used here for the plant collection held at the Conservation and Land Management office, Kununurra) WESTERN AUSTRALIA: Ord R., *C. Done* 467, 8.vi.1981 (DNA); Carr Boyd Ra., *C. Done* & *C. Dunlop* 561, 15.i.1982 (CALM); Carr Boyd Ra., *C. Done* 562, 15.i.1982 (CALM); Lake Kununurra, *C. Done* 608, 18.vi.1982 (CALM); 6 km south of Doon Doon Station, *C. Done* 729, 10.i.1985 (CANB, DNA, MEL, NSW, PERTH); Darwin (cult.), *C.R. Dunlop* 8890, 1.ii.1989 (DNA); Carr Boyd Ra., *P.J. White* 56, 27.viii.1988 (DNA).

Distribution. *E. ordiana* is known from six populations, all in close proximity to Kununurra, Western Australia (Figure 2).

Habitat. Shrublands and Low Open Woodlands on the upper slopes of sandstone ranges. Associated species include *Terminalia canescens*, *Triodia* spp., *E. brevifolia* and *E. confluens*.

Flowering period. Collected in flower in January, June and July.

Fruiting period. Fruit collected in January, June-August, October and November. In the absence of fire, indehiscent fruits are probably present throughout the year.

Notes. Within series *Subexsertae*, *E. ordiana* is most closely allied with *E. brevifolia* and *E. leucophloia*. Seedling and intermediate leaves of these species are similar in size and shape; *E. ordiana* differs in the juvenile stages by having less markedly quadrangular stems. *E. ordiana* retains its broad foliage through to the adult stages and in this respect shows affinities with *E. mooreana*. In bud and fruit characters the combination of a rostrate operculum, a relatively small capsule and a thin disc serves to distinguish *E. ordiana* from *E. brevifolia* and *E. mooreana*. *E. leucophloia*, which has a narrow disc and an operculum described as hemispherical or eonial to slightly rostrate (Brooker 1976), is readily recognised by the strongly exerted broad-based valves of the fruit.

Conservation status. The species does not occur in a conservation reserve but does not appear to be under immediate threat. With populations all within a range of 90 km, a coding of 2R would be appropriate by the Briggs and Leigh (1989) formula.

Etymology. The specific epithet is derived from the Ord River around which this species occurs.

Acknowledgements

We thank Ian Scott who first noticed this species and brought it to our attention. We are also grateful to Peter White for collecting seed and to Milton Andrews for the illustration. Mr Ken Hill of the New South Wales National Herbarium refereed the paper, making valuable comments as well as contributing extra data from specimens not seen by the authors.

References

- Blakely, W.F. (1965). "A key to the Eucalypts." 3rd. ed. (Forestry and Timber Bureau, Canberra.)
- Boland, D.J., Brooker, M.I.H. & Tumbull, J.W. (1980). "Eucalyptus Seed." (CSIRO, Melbourne.)
- Briggs, J.D. & Leigh, J.H. (1989). "Rare or Threatened Australian Plants." Revised edn. (Australian National Parks and Wildlife Service, Canberra.)
- Brooker, M.I.H. (1976). Six new taxa of *Eucalyptus* from Western Australia. *Nuytsia* 2: 103-117.
- Brooker, M.I.H. & Done, C.C. (1986). *Eucalyptus ceracea*, *E. rupestris* and *E. chlorophylla* (Myrtaceae), three new species in the Kimberley Division of Western Australia. *Nuytsia* 5: 381-390.
- Carr, D.J. & Carr, S.G.M. (1988). "Eucalyptus II." (Phytoglyph Press, Canberra.)
- Chippendale, G.M. (1988). *Eucalyptus*, *Angophora* (Myrtaceae). In A.S. George (ed.), "Flora of Australia", vol. 19. (Australian Government Publishing Service, Canberra.)
- Kenneally, K.F. (1989). "Checklist of Vascular Plants of the Kimberley, Western Australia." Handbook No. 14 (W. Austral. Naturalists' Club, Perth.)
- Pryor, L.D. & Johnson, L.A.S. (1971). "A Classification of the Eucalypts." (Australian National University Press, Canberra.)